

REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1-33 are pending in this application.

35 U.S.C. § 103

Claims 1-5, 10-12, 14-19, 22, 29 and 31-33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,405,219 to Saether et al. (hereinafter "Saether") in view of U.S. Patent No. 5,689,688 to Strong et al. (hereinafter "Strong"). Applicant respectfully submits that claims 1-5, 10-12, 14-19, 22, 29 and 31-33 are not obvious over Saether in view of Strong.

Saether discloses:

This application relates generally to distributing updates to geographically distributed servers on a network, and, more specifically, to enabling the version of each source file stored on heterogeneous content servers to be automatically updated.

Col. 1, lines 10-14.

Fig. 2 of Saether "is a flow chart illustrating an overview 116 of the main logic for providing a current version of a set of source files from at least one source server to a plurality of content servers." Col.6, lines 52-55. Referring to Fig. 2 of Saether, block 120 states "copy set of current version of source files created on each source server to primary global server". Fig. 1 illustrates a primary global server 102 and several source servers 112A, 112B and 112C. Referring again to Fig. 2 of Saether, block 122 states "create version delivery list and version change container and distribute to each secondary global server." Fig. 1 illustrates secondary global servers 108A and 108B. In Fig. 2 of Saether, block

124 states “employ version delivery list and content change container to copy new and/or source files to local content server.” Fig. 1 illustrates content servers 104B and 104C. In Fig. 2 of Saether, block 126 states “update to current version of set of source files on each local content server by renaming.”

The procedure disclosed in Fig. 2 of Saether is quite different from claim 1 of the present application. Claim 1 recites:

A method of synchronizing data among a plurality of web servers, wherein each of the plurality of web servers is coupled to a common data server, the method comprising:

- retrieving a scheduled activation time from the data server;
- prior to the scheduled activation time, retrieving updated data into staging caches in the plurality of web servers; and
- at the scheduled activation time, copying the updated data from the staging caches in each of the plurality of web servers to an active cache within each of the plurality of web servers, respectively.

The Office Action admits that Saether does not disclose “retrieving a scheduled activation time from the data server.” See Office Action, page 2, last bullet item.

Further, Saether does not disclose or suggest “prior to the scheduled activation time, retrieving updated data into staging caches in the plurality of web servers.” As discussed above with respect to Fig. 2 of Saether, the Saether reference discloses copying files to a primary global server (block 120), distributing a version delivery list and version change container to each secondary global server (block 122), and copying new and/or source files to local content server (block 124). This process does not disclose retrieving updated data into staging caches in the plurality of web servers. Instead, Saether discloses moving files and other information between several different servers until the files reach a

local content server. Saether does not disclose or suggest the use of a staging cache in a web server. Thus, Saether fails to disclose or suggest retrieving updated data into staging caches in the plurality of web servers.

Additionally, Saether fails to disclose or suggest “at the scheduled activation time, copying the updated data from the staging caches in each of the plurality of web servers to an active cache within each of the plurality of web servers, respectively.” The process disclosed in Saether does not disclose copying the updated data from the staging caches in each of the plurality of web servers to an active cache within each of the plurality of web servers. As discussed above, Saether does not disclose or suggest the use of a staging cache in a web server. Further, Saether does not disclose or suggest the use of an active cache in a web server. Thus, Saether fails to disclose or suggest copying the updated data from the staging caches in each of the plurality of web servers to an active cache within each of the plurality of web servers.

Regarding the Strong reference, Strong is directed to synchronizing internal times maintained by network nodes to a reference time source. Col. 1, lines 10-13. Strong uses a master node to synchronize times for slave nodes by using a synchronization message bearing a reference time stamp according to a time scale maintained by the master node. Col. 9, lines 31-41. Thus, Strong is primarily concerned with techniques for calculating and improving the “accuracy of synchronization.” Col. 18, lines 53-57. Considerable time is spent teaching how to calculate synchronization times accurately. For example, Col. 10, lines 35-68 show equations used to calculate the synchronization time.

The Strong reference fails to disclose or suggest (i) “retrieving a scheduled activation time from the data server”, (ii) “retrieving updated data into staging caches in the plurality of web servers”, or (iii) “at the scheduled activation time, copying the updated data from the staging caches in each of the plurality of web servers to an active cache within each of the plurality of web servers, respectively.” See claim 1.

Strong is not concerned with data synchronization techniques using “staging caches” and “active caches” in conjunction with a “scheduled activation time” as recited in claim 1. As such, Strong fails to disclose or suggest staging caches or active caches.

Because neither Saether nor Strong teach or suggest the elements of claim 1, it is not possible to combine Saether and Strong to arrive at Applicant’s claimed invention. Accordingly, the combination of Saether and Strong do not teach, suggest, or provide any motivation to arrive at the solution claimed in claim 1.

Thus, for at least these reasons, Applicant respectfully submits that claim 1 is allowable over Saether in view of Strong.

Given that claims 2-5, 10-12 and 14 depend from claim 1, Applicant respectfully submits that claims 2-5, 10-12 and 14 are likewise allowable over Saether in view of Strong for at least the reasons discussed above.

Claim 15 recites:

A system comprising:
a plurality of web servers coupled to a common data server, wherein each of the plurality of web servers comprises:
a staging cache;
an active data cache coupled to the staging cache;

wherein the web server is configured to retrieve a scheduled activation time from the data server, and further configured to retrieve updated data from the data server into the staging cache prior to the scheduled activation time; and

wherein the web server is configured to copy data from the staging cache to the active data cache at the scheduled activation time.

As discussed above with respect to claim 1, Saether and Strong individually, and in combination, fail to disclose or suggest (i) “a staging cache”, (ii) “an active data cache coupled to the staging cache”, (iii) “the web server is configured to retrieve a scheduled activation time from the data server”, or (iv) “the web server is configured to copy data from the staging cache to the active data cache at the scheduled activation time.” See claim 15.

Thus, for at least these reasons, Applicant respectfully submits that claim 15 is allowable over Saether in view of Strong.

Given that claims 16-19 and 22 depend from claim 15, Applicant respectfully submits that claims 16-19 and 22 are likewise allowable over Saether in view of Strong for at least the reasons discussed above.

Claim 29 recites:

A method of synchronizing data among a plurality of web servers, wherein each of the plurality of web servers is coupled to a common data server, the method comprising:

providing a scheduled activation time from the data server to each of the plurality of web servers;

communicating updated data into a staging cache in each of the plurality of web servers prior to the scheduled activation time; and

copying data from the staging cache in each of the plurality of the web servers to an active cache in each of the plurality of the web servers, respectively, at the scheduled activation time.

As discussed above with respect to claim 1, Saether and Strong individually, and in combination, fail to disclose or suggest (i) “providing a scheduled activation time from the data server to each of the plurality of web servers”, or (ii) “copying data from the staging cache in each of the plurality of the web servers to an active cache in each of the plurality of web servers, respectively, at the scheduled activation time.” See claim 29.

Thus, for at least these reasons, Applicant respectfully submits that claim 29 is allowable over Saether in view of Strong.

Given that claims 31-33 depend from claim 29, Applicant respectfully submits that claims 31-33 are likewise allowable over Saether in view of Strong for at least the reasons discussed above.

Claims 6 and 30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Saether in view of Strong and in further view of U.S. Patent No. 5,958,019 to Hagersten et al. (hereinafter “Hagersten”). Applicant respectfully submits that claims 6 and 30 are not obvious over Saether in view of Strong and in further view of Hagersten.

As discussed above, claims 1 and 29 (from which claims 6 and 30 depend, respectively) are not obvious over Saether in view of Strong. Hagersten relates to synchronization operations within multiprocessor computer systems. However, Hagersten fails to disclose or suggest a scheduled activation time, a staging cache, or an active cache as recited in claims 1 and 29. Accordingly, Applicant submits that claims 6 and 30 are not obvious over Saether in view of Strong and in further view of Hagersten.

Claims 7 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Saether in view of Strong in further view of U.S. Patent No. 5,923,855 to Yamazaki (hereinafter "Yamazaki"). Applicant respectfully submits that claims 7 and 20 are not obvious over Saether in view of Strong in further view of Yamazaki.

As discussed above, claims 1 and 15 (from which claims 7 and 20 depend, respectively) are not obvious over Saether in view of Strong. Yamazaki relates to a multi-processor system and method for synchronizing among processors with cache memory having reset state, invalid state, and valid state. However, Yamazaki fails to disclose or suggest a scheduled activation time, a staging cache, or an active data cache as recited in claims 1 and 15. Accordingly, Applicant submits that claims 7 and 20 are not obvious over Saether in view of Strong in further view of Yamazaki.

Claims 8 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Saether in view of Strong and in further view of U.S. Patent No. 5,796,946 to Sakon (hereinafter "Sakon"). Applicant respectfully submits that claims 8 and 21 are not obvious over Saether in view of Strong and in further view of Sakon.

As discussed above, claims 1 and 15 (from which claims 8 and 21 depend, respectively) are not obvious over Saether in view of Strong. Sakon relates to a barrier synchronizer in a multi-processor system. However, Sakon fails to disclose or suggest a scheduled activation time, a staging cache, or an active data cache as recited in claims 1 and 15. Accordingly, Applicant submits that claims 8

and 21 are not obvious over Saether in view of Strong and in further view of Sakon.

Claim 13 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Saether in view of Strong and in further view of U.S. Patent No. 5,774,660 to Brendel et al. (hereinafter "Brendel"). Applicant respectfully submits that claim 13 is not obvious over Saether in view of Strong and in further view of Brendel.

As discussed above, claim 1 (from which claim 13 depends) is not obvious over Saether in view of Strong. Brendel discloses a world-wide-web server with delayed resource-binding for resource-based load balancing on a distributed resource multi-node network. However, Brendel fails to disclose or suggest retrieving a scheduled activation time, retrieving updated data into staging caches, or copying the updated data from the staging caches in each of the plurality of web servers to an active cache within each of the plurality of web servers, as recited in claim 1. Accordingly, Applicant submits that claim 13 is not obvious over Saether in view of Strong and in further view of Brendel.

Claims 23-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Saether in view of Strong in further view of Yamazaki in further view of Sakon. Applicant respectfully submits that claims 23-28 are not obvious over Saether in view of Strong in view of Yamazaki in view of Sakon.

Claim 23 recites:

One or more computer-readable media having stored thereon a computer program comprising the following steps:
retrieving a scheduled activation time from a data server;
prior to the scheduled activation time, retrieving updated data into a staging cache in a server;

at the scheduled activation time, copying data from the staging cache in the server to an active cache in the server; and
after the scheduled activation time, updating data caches in the data server and calculating a next scheduled activation time.

As discussed above with respect to claim 1 neither Saether nor Strong, alone or in combination, disclose or suggest (i) retrieving a scheduled activation time from a data server, (ii) retrieving updated data into a staging cache in a server, or (iii) at the scheduled activation time, copying data from the staging cache in the server to an active cache in the server. See claim 23. Additionally, Applicant submits that neither Yamazaki nor Sakon disclose or suggest (i) retrieving a scheduled activation time from a data server, (ii) retrieving updated data into a staging cache in a server, or (iii) at the scheduled activation time, copying data from the staging cache in the server to an active cache in the server, for at least the reasons discussed above. Accordingly, Applicant submits that claim 23 is not obvious over Saether in view of Strong in view of Yamazaki in view of Sakon.

Thus, for at least these reasons, Applicant respectfully submits that claim 23 is allowable over Saether in view of Strong in view of Yamazaki in view of Sakon.

Given that claims 24-28 depend from claim 23, Applicant respectfully submits that claims 24-28 are likewise allowable over Saether in view of Strong in view of Yamazaki in view of Sakon for at least the reasons discussed above.

Applicant respectfully requests that the §103 rejections be withdrawn.

Conclusion

Claims 1-33 are in condition for allowance. Applicant respectfully requests reconsideration and issuance of the subject application. Should any matter in this case remain unresolved, the undersigned attorney respectfully requests a telephone conference with the Examiner to resolve any such outstanding matter.

Respectfully Submitted,

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